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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,982	05/24/2005	Yaochun Shen	66347-119-2	6976
25269	7590	06/11/2007	EXAMINER	
DYKEMA GOSSETT PLLC			TANINGCO, MARCUS H	
FRANKLIN SQUARE, THIRD FLOOR WEST			ART UNIT	PAPER NUMBER
1300 I STREET, NW			2884	
WASHINGTON, DC 20005			MAIL DATE	DELIVERY MODE
			06/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/526,982	SHEN ET AL.
<b>Examiner</b>	<b>Art Unit</b>	
Marcus H. Taningco	2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 24 May 2005.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-14 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 07 March 2005 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/7/05.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_ .

## DETAILED ACTION

### Claim Objections

Claim 1 is objected to because of the following informalities: The term “Preceived” in the last line of claim 1 should be replaced with the term “received”. Appropriate correction is required.

### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 6-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Jiang et al. (US 2002/0153874).

With regards to claim 1, Jiang et al. disclose a terahertz spectroscopy system (Fig. 1) comprising: a terahertz source (20) for illuminating, in use, a sample (30) with a pulse of radiation in the terahertz frequency range; excitation means (12) for providing excitation energy in the form of a beam on a selected portion of the illuminated sample prior to or during illumination of the sample by the terahertz source; a terahertz sensor (38) for receiving energy from the illuminated sample; and processing means (46) for receiving signals from the terahertz sensor and processing them to provide an output representative of the terahertz spectrum received by the sensor.

With regards to claim 2, Jiang et al. disclose said excitation means (12) is a laser [0050]

With regards to claim 3, Jiang et al. disclose that said laser provides the excitation for the terahertz source [0050].

With regards to claim 6, Jiang et al. disclose optical components (36) are provided in the system in order to focus the terahertz radiation onto the sample and onto the terahertz sensor [0053].

With regards to claims 7 and 8, Jiang et al. disclose means are provided for controlling the illumination and direction of the exciting energy to scan it across the surface of the sample in use [0053].

With regards to claim 9, Jiang et al. disclose means for focusing or localizing the excitation energy in order to control its spatial resolution and hence control the overall spatial resolution of the system [0011].

With regards to claims 10-12, Jiang et al. disclose that said sensor may either be a EO crystal or a photoconductive sensor [0055].

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Jiang et al.

With regards to claims 4 and 5, Jiang et al. discloses the claimed invention except for the specific type of excitation energy. With regards to a neutron or acoustic wave excitation source, those skilled in the art appreciate that, absent some degree of criticality, choosing an excitation source would have been a matter of routine design choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jiang et al in view of Nelson et al. (US 6,479,822).

With regards to claim 13, Jiang et al. disclose the claimed invention except for the computer controlling the light source. Nelson et al. teach a terahertz spectroscopy system comprising a computer to control the light source (column 4, lines 39-48). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the computer taught by Jiang et al. to control said light source in order to control the period of the periodic spatial pattern.

With regards to claim 14, Jiang et al. discloses the claimed invention according to claim 13 wherein the computer compares a first signal with a second, reference signal to provide a differential signal [0004].

## **Conclusion**

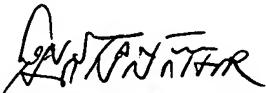
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus H. Taningco whose telephone number is (571) 272-1848. The examiner can normally be reached on M - F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Marcus Taningco*  
Patent Examiner  
GAU 2884



CONSTANTINE HANNAUER  
PRIMARY EXAMINER